NASA Briefs

TRW notifies NASA AXAF will be late

TRW Space and Electronics Group, Redondo Beach, Calif., has notified NASA that it will be unable to deliver the Advanced X-ray Astrophysics Facility to Kennedy Space Center on June 1, 1998, as required by contract, because it has experienced delays in assembly and testing of the facility. TRW is NASA's prime contractor for the observatory. NASA and contractor officials met at NASA Headquarters to discuss the issue. While no new delivery date was agreed upon, the agency has directed TRW to develop a plan of action that would show how the contractor can minimize impact to the June 1 delivery. Although a delivery delay could delay launch, currently scheduled for August 1998 on STS-93, the full impact isn't known.

NASA sharing efforts for far-future concepts

Many people wonder when we will be able to travel to distant solar systems as easily as envisioned in science fiction. Discover NASA's perspective on the prospects that exist today for achieving such far-future visions via a new World Wide Web site called, "Warp Drive, When?" Explore the site at: http://www.lerc.nasa.gov/WWW/PAO/warp.htm. This web site explains the challenges of interstellar travel, the prospects and limitations of existing propulsion ideas, and the prospects emerging from science that may one day provide the breakthroughs needed to enable practical interstellar voyages. For a look at what NASA is doing to achieve such breakthroughs, another web site is available about the new NASA Breakthrough Propulsion Physics program: http://www.lerc.nasa.gov/WWW/bpp/

Onizuka family accepts memorial

NASA representatives presented a memorial plaque to dedicate the world altitude record for a propeller-driven aircraft to the memory of Col. Ellison Onizuka on Dec. 10. The plaque was presented to the Onizuka family and the Hawaiian community in a ceremony at the U.S. Navy's Pacific Missile Range Facility, Barking Sands, Kauai. Another plaque will be provided to the Onizuka Museum on Kona. Onizuka, Hawaii's first astronaut, was killed in the *Challenger* accident in January 1986. The record of 71,530 feet was set by the solar-powered Pathfinder on July 7. The remotely piloted aircraft is part of NASA's Environmental Research Aircraft and Sensor Technology program.

Abbey wishes employees joyous holiday season

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Our science efforts have also been impressive this year. Excellent research has been done aboard the Mir and the Shuttle, efforts that are critical to our understanding of how humans are affected by the space environment. And with the establishment of the Space Biomedical Research Institute, we have taken a critical step in demonstrating yet another of the advantages partnering with the outside community can bring to the space program.

We should all take pride in our many other efforts to reach out to the community, understanding that their support is critical to our future. Our agreement with the Clear Creek Independent School District to build a middle school on JSC grounds is a historic achievement, and a visible indicator of our support of the nation's efforts to improve the education of our young people, particularly in math and science. Despite some weather challenges, the Center's efforts in support of Inspection 97 were excellent, and we also had another outstanding Open House this year. We have made commendable progress, across the board, in our efforts to build mutually beneficial relationships with the outside community, and this progress will pay many dividends in the future.

The Center is taking on difficult challenges in many other important areas, many of which will have a long-term effect on our future activities. The efforts of our Space Operations Management team to bring a consolidated space operations contract on line will set the stage for improved services at reduced cost. And our activities in support of ISO 9001 certification have already begun to bear fruit in the form of improved processes and a clearer understanding of quality principles.

The White Sands Test Facility continues to demonstrate world class expertise with an outstanding year of performance. It also continues to strive for efficiencies in operations as it moves forward to consolidate support activities for the test facility and the tracking and data relay ground stations. We will miss Grady McCright, the director, and wish him well in his retirement. Joe Fries, his successor, will I'm sure make 1998 and the coming years productive ones for White Sands.

Finally, let me say that we continue to make significant progress in our safety efforts. We recently posted one of the safest quarters on record, demonstrating that our efforts to raise awareness levels and educate our people about this critical subject have had the intended effect. As you celebrate the holiday season, I encourage you to keep safety uppermost in your mind.

This is a great team, with many exciting challenges ahead of us. Our experience this year has proven that we can meet these challenges with creativity, innovation and hard work. I thank you all for your dedication, your can-do spirit, and your many outstanding contributions to our future in space. My heartfelt wishes to you and your families for a joyous holiday season.

JSC Photo 97-17462 by Steve Candler

GOOD CAUSE—JSC Director George Abbey drops a toy in to the "Toys for Tots" donation box in the Bldg. 3 cafeteria on Dec. 2. Astronaut candidate and Marine Maj. Charles Hobaugh, behind Abbey, and Sgt. Pat Moser, Houston coordinator for Toys for Tots with Marine Reserve Center in Houston witnessed the start of the drive to collect toys for underprivileged children over the holidays.

JSC gives half a million

Once again, JSC employees have set a record for generosity to those in need. Almost 2,200 employees have contributed $502,425 to this year's Combined Federal Campaign—the first time that the half-million dollar mark has been reached.

This is more than $22,000 above the Center's $480,000 goal. In addition, the percent of employees participating in this year's campaign increased over last year's and it was the first time in many years that the percentage of givers rose.

"A special thank you goes to all those JSC employees who gave so generously as well as to the organization coordinators/canvassers who helped to make this happen," said Coordinator Teresa Sullivan.

Seven of the largest organizations reached 100 percent participation and 15 organizations exceeded their dollar goal. The Human Resources Office led the way with 248 percent of its goal and the organization with the next highest percentage of its goal was the Equal Opportunity Programs Office with 222 percent.

Roundup takes holiday break until Jan. 16

Today's Space News Roundup will be the last of 1997, as the next scheduled date of publication would have been Jan. 2.

The first Roundup of 1998 will be published on Jan. 16.

The deadline for community and employee awards stories for the Jan. 16 Roundup will be 5 p.m. Jan. 5. The deadline for Dates and Data calendar submissions will be 5 p.m. Jan. 7.

JSC Quality System seeking certification again in February

By Leon Blum

A November registration audit of the JSC Quality System found only one major non-conforming element, and a group of top managers is working to correct the problem in time for ISO 9001 certification in February.

The National Quality Assurance registration audit, conducted Nov. 17-21, found one the major non-conformance in section 4.14, "Corrective and Preventive Action." The audit also identified 23 minor non-conforming elements and made nine observations that JSC must address.

A working group of deputy directors from the various JSC organizations has been convened to develop the corrective action plan required to respond to the major non-conformance. A draft corrective action plan was to be reviewed by JSC senior managers on Dec. 18 and forwarded to NQA no later than Dec. 22.

The finding of a major non-conformance will slightly delay JSC's receipt of an ISO 9001 certification. NQA has given JSC a "grace period" until late February 1998, to effectively respond to the specific corrective action issues raised during the November 1997 audit. Once JSC has completed the necessary activities, NQA will re-audit the Corrective Action and Prevention portions of the JSC Quality System.

When NQA is satisfied that the Corrective and Preventive Action System has been effectively implemented, it will recommend JSC for ISO 9001 Certification. If JSC doesn't pass the audit in February, it will be faced with a full re-audit of the quality system in the summer of 1998.

Corrective action refers to those activities required to be performed when a non-conformance is identified, to prevent its reoccurrence. The NQA view of corrective action's scope is significantly broader than what JSC had been used to previously, which leads us to apply corrective action activities mainly in the context of hardware or software anomalies. The expanded ISO 9001 view of corrective action applies it to all processes for which we have responsibility. This includes such things as internal and external customer issues, supplier and sub-contractor issues, resource issues, quality system issues, and general management operations. This view is consistent with the concept that ISO 9001 is more a "management" system than it is a "quality" system.

JSC civil servants and contractors should expect actions to be initiated after the year end that address improving requirements, training extensively in corrective and preventive action, and re-looking at some of the cultural and management factors that may have been impediments to successful implementation of corrective and preventive action at JSC.

Embry-Riddle to offer classes at Ellington

JSC's satellite campus for Embry-Riddle Aeronautical University is accepting registration until Jan. 5.

Undergraduate classes at Ellington Field will include: Basic Algebra and Trigonometry, from 5:30-8 p.m. Tuesdays and Thursdays; Social Responsibility and Ethics in Management, from 5:30-10 p.m. Fridays; Public Administration, from 5:30-10 p.m. Mondays; and Flight Physiology, from 8 a.m.-5 pm. Saturdays.

The U.S. Coast Guard at Ellington Field also is sponsoring a master of science in aeronautical science operations or management. Classes will include: Human Factors in Aviation, from 5-9:30 p.m. Fridays and 8 am.-5 p.m. Saturdays, Air Carrier Operations, from 5:30-10 p.m. Mondays; and MAS 609 Aircraft Maintenance Management, from 5:30-10 pm. Wednesdays.

For registration information, call Larry Powers, Houston resident director for ERAU, at x49456.

Space News ROUNDUP

The Roundup is an official publication of the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for all space center employees. Deadline for the submission of articles is Friday, three weeks before the desired date of publication.

The Roundup office is in Bldg. 2, Rm. 181. The mail code is AP3. The main Roundup telephone number is x38648, and the fax number is x45165. Electronic mail messages may be directed to kelly.o.humphries1@jsc.nasa.gov.

Editor . . . . . .Kelly Humphries

Station taking shape as technicians ring in new year

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manager. "By the end of the 1998 fiscal year, we will be more than 80 percent complete with our portion of the program."

Other station hardware that has accomplished recent manufacturing milestones includes a test article called the S0 truss, planned to be the first segment of the 360-foot long truss that will be the backbone of the ISS. The test article was removed from the assembly fixture in a Boeing clean room at Huntington Beach, Calif., to make way for the flight unit. The center truss segment for the ISS is 44 feet long, 15 feet in diameter and will weigh about 33,000 pounds at launch. It will be launched and attached on orbit to the laboratory module in early 2000, the first of nine such truss segments that will hold the solar arrays and distribute power, data, communications and thermal systems.

The first station solar arrays and equipment for generating electrical power, a photovoltaic module package designated the P6 cargo element, is now at Marshall Space Flight Center for an extensive battery of structural tests. The photovoltaic module will generate, store and distribute electrical power.

The completed station will include four sucy modules, all of which are designed and developed at Boeing's Rocketdyne Propulsion & Power facility in Canoga Park, Calif.

Earlier this fall, the development of the U.S. laboratory module passed a milestone when electrical power was supplied to it for the first time at Marshall's space station manufacturing building. To conduct the lab "power-on" test, electricity was delivered from a power supply rack outside the module to simulate the solar array power that would be provided on-orbit.

"This power-on test was a huge milestone because it marks the beginning of our ground test activities and it is a good measure of the Lab assembly status," said Steve Goo, Boeing lab manager.

Upcoming milestones for the laboratory module include multi-rack testing, the installation of racks, the beginning of software integration and finally shipment to the Kennedy Space Center in Florida, targeted for August 1998. The lab is scheduled to be launched aboard STS-98 in May 1999.

Meanwhile at JSC, as the first station elements near launch, Boeing is joining with NASA to build an ISS Systems Integration Lab at JSC's Sonny Carter Training Facility. The new lab will allow integrated testing of station hardware and software.

"Without this capability we would rely solely on computer simulations to make sure that the equipment was properly integrated," said Michael Raftery, Boeing ISIL project manager. "Now we will have actual hardware together in one lab to give us an extra level of assurance that the equipment will work properly on-orbit."

"The excitement is definitely building in the hearts and minds of people working on this program," Stone said.

NASA-JSC